

AMENDMENTS TO CLAIMS

Claims 1-21 (canceled)

Claim 22 (new): A reinforced roof and pillar system for an automotive vehicle, comprising:

an automotive vehicle frame for a roof and pillar of the automotive vehicle, the frame having a plurality of wall portions defining a cavity therein;

a skeleton member disposed within the cavity, the skeleton member having a longitudinal axis, the skeleton member comprising a first portion with a plurality of ribs and a second portion extending away from the first portion, the second portion also including a plurality of ribs; and

a structural foam material in sealing contact with the skeleton member and at least one of the plurality of wall portions, wherein;

- i) at least two of the plurality of ribs of the first portion are in spaced apart opposing relation to each other.

Claim 23 (new): A reinforced roof and pillar system as in claim 22 wherein the automotive vehicle frame includes a roof rail adjoining an A-pillar and the first portion of the skeleton member is located in the roof rail and the second portion of the skeleton member extends into the A-pillar.

Claim 24 (new): A reinforced roof and pillar system as in claim 23 wherein the first portion has a first cross-sectional area taken generally perpendicular to the axis that is less than about fifty percent of a second cross-sectional area of the second portion taken generally perpendicular to the axis.

Claim 25 (new): A reinforced roof and pillar system as in claim 22 wherein the automotive vehicle frame includes a B-pillar and the first portion of the skeleton member extends downwardly relative to the second portion of the skeleton member.

Claim 26 (new): A reinforced roof and pillar system as in claim 25 wherein the first portion has a first cross-sectional area taken generally perpendicular to the axis

that is less than about fifty percent of a second cross-sectional area of the second portion taken generally perpendicular to the axis.

Claim 27 (new): A reinforced roof and pillar system as in claim 22 wherein the automotive vehicle frame includes a roof rail and wherein the first and second portions of the skeleton member are located in the roof rail.

Claim 28 (new): A reinforced roof and pillar system as in claim 27 wherein the first portion and the second portion are separated by a third portion, the third portion including a through-hole extending through a substantial amount of the third portion, the substantial amount being greater than half of the third portion.

Claim 29 (new): A reinforced roof and pillar system as in claim 22 wherein at least two ribs in the first portion intersect with each other and the plurality of ribs in the first portion are substantially devoid of the foam.

Claim 30 (new): A reinforced roof and pillar system as in claim 24 wherein the skeleton member and the structural foam cooperatively seal the cavity to block passage of materials through the cavity

Claim 31 (new): A reinforced roof and pillar system as in claim 27 wherein the skeleton member and the structural foam cooperatively seal the cavity to block passage of materials through the cavity.

Claim 32 (new): A reinforced roof and pillar system for an automotive vehicle, comprising:

- an automotive vehicle frame for a roof and pillar of the automotive vehicle, the frame having a plurality of wall portions defining a cavity therein;

- a skeleton member disposed within the cavity, the skeleton member having a longitudinal axis, the skeleton member comprising a first portion with a plurality of

ribs and a second portion extending away from the first portion, the second portion also including a plurality of ribs; and

a structural foam material in sealing contact with the skeleton member and at least one of the plurality of wall portions, wherein;

- i) at least two of the plurality of ribs of the first portion and at least two of the plurality of ribs of the second portion are in spaced apart opposing relation to each other; and
- ii) the first portion is contiguous with the second portion and the first portion and the second portion are substantially aligned with each other along the longitudinal axis.

Claim 33 (new): A reinforced roof and pillar system as in claim 32 wherein the automotive vehicle frame includes a roof rail adjoining an A-pillar and the first portion of the skeleton member is located in the roof rail and the second portion of the skeleton member extends into the A-pillar.

Claim 34 (new): A reinforced roof and pillar system as in claim 33 wherein the first portion has a first cross-sectional area taken generally perpendicular to the axis that is less than about fifty percent of a second cross-sectional area of the second portion taken generally perpendicular to the axis.

Claim 35 (new): A reinforced roof and pillar system as in claim 32 wherein the automotive vehicle frame includes a B-pillar and the first portion of the skeleton member extends downwardly relative to the second portion of the skeleton member.

Claim 36 (new): A reinforced roof and pillar system as in claim 35 wherein the first portion has a first cross-sectional area taken generally perpendicular to the axis that is less than about fifty percent of a second cross-sectional area of the second portion taken generally perpendicular to the axis.

Claim 37 (new): A reinforced roof and pillar system as in claim 32 wherein the automotive vehicle frame includes a roof rail and wherein the first and second portions of the skeleton member are located in the roof rail.

Claim 38 (new): A reinforced roof and pillar system as in claim 37 wherein the first portion and the second portion are separated by a third portion, the third portion including a through-hole extending through a substantial amount of the third portion, the substantial amount being greater than half of the third portion.

Claim 39 (new): A reinforced roof and pillar system as in claim 32 wherein at least two ribs in the first portion intersect with each other and the plurality of ribs in the first portion are substantially devoid of the foam.

Claim 40 (new): A reinforced roof and pillar system as in claim 34 wherein the skeleton member and the structural foam cooperatively seal the cavity to block passage of materials through the cavity

Claim 41 (new): A reinforced roof and pillar system as in claim 37 wherein the skeleton member and the structural foam cooperatively seal the cavity to block passage of materials through the cavity.

Claim 42 (new): A reinforced roof and pillar system for an automotive vehicle, comprising:

an automotive vehicle frame for a roof and pillar of the automotive vehicle, the frame having a plurality of wall portions defining a cavity therein, wherein the automotive vehicle frame includes a roof rail adjoining an A-pillar;

a skeleton member disposed within the cavity, the skeleton member having a longitudinal axis, the skeleton member comprising a first portion with a plurality of ribs and a second portion extending away from the first portion, the second portion also including a plurality of ribs; and

a structural foam material in sealing contact with the skeleton member and at least one of the plurality of wall portions, wherein;

- i) at least two of the plurality of ribs of the first portion and at least two of the plurality of ribs of the second portion are in spaced apart opposing relation to each other;
- ii) the first portion is contiguous with the second portion and the first portion and the second portion are substantially aligned with each other along the longitudinal axis; and
- iii) the first portion of the skeleton member is located in the roof rail and the second portion of the skeleton member extends into the A-pillar.

Claim 43 (new): A reinforced roof and pillar system as in claim 42 wherein the first portion has a first cross-sectional area taken generally perpendicular to the axis that is less than about fifty percent of a second cross-sectional area of the second portion taken generally perpendicular to the axis.

Claim 44 (new): A reinforced roof and pillar system as in claim 43 wherein the skeleton member and the structural foam cooperatively seal the cavity to block passage of materials through the cavity.